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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,996

09/26/2005

Gerhard Jonschker

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EXAMINER

NGUYEN, TRI V

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/530,996	<b>Applicant(s)</b> JONSCHKER ET AL.	
	<b>Examiner</b> TRI V. NGUYEN	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,2,5,6,8 and 11-23 is/are pending in the application.
- 4a) Of the above claim(s) 11,12 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,8,13-19 and 21-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Upon entry of the response filed on 08/25/09, claim 5 is amended; Claims 11, 12, 20 are withdrawn; Claims 21-23 are added and Claims 3, 4, 7, 9 and 10 are cancelled. The currently pending claims are Claims 1, 2, 5, 6, 8, 11-23.

Based on applicants' remarks and amendment to correct the antecedent feature, the 112(2) rejections and 102(e) rejections are withdrawn; however, the 103(a) are maintained.

### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 2, 5, 6, 8, 13-19 and 21-23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Soane et al. in view of Brueck et al. (WO 01/40394 - the US equivalent 2002/0193504 is referred to).

Soane et al. disclose a textile treatment agent that includes inorganic nanoparticles that are surface modified and various ingredients such as surfactants and fragrances (abstract, § 13, 81, 89-97, 124, 130 and 143). Furthermore, Soane et al. disclose the features of various textiles such as cotton, wool, silk and synthetic fibers (§ 93), a concentration of nanoparticles of 0.1 to 95% (§96), cationic nanoparticles (§ 97) and a diameter range of about 1 to 1000 nm (§ 81). It is noted that the inorganic surface modification is also met by the teaching of the silica or silane coated inorganic nanoparticles (§ 120-126, 133 and 134).

The Soane et al. reference disclose the claimed invention but does not explicitly disclose the inorganic nanoparticle being surface modified by the claimed inorganic compounds; however, it is noted that it is well settled that it is *prima facie* obvious to combine two

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ingredients, each of which is targeted by the prior art to be useful for the same purpose. *In re Lindner* 457 F.2d 506,509, 173 USPQ 356,359 (CCPA 1972).

Given that the Brueck et al. reference teaches the feature of surfaced modified inorganic particle in the range of 5-40 nm (§51) such as SiO<sub>2</sub> particle modified by ZrO<sub>2</sub> or TiO<sub>2</sub> (§ 58) in a textile treatment composition, it would have been obvious to one of ordinary skill in the art to use the surfaced modification agents and nanoparticle features in the composition of the Soane et al. reference.

Soane et al. and Brueck et al. disclose the claimed composition but do not explicitly disclose a composition comprising the agents, thickness and diameter ranges in the amounts as those recited by the Applicant.

Regarding the thickness of the layer, given that the Soane et al. and Brueck et al. references disclose nanoparticles being in the same range as applicants to coat the textile (Soane et al.: § 81 and Brueck et al: § 2), it would have been obvious to one of ordinary skill in the art to utilize any of the taught thickness, including those presently claimed, to obtain a suitable composition, e.g. it would have been obvious to optimize the components based on the desired effect - see the various modifications shown in the examples starting on § 99.

Regarding the inorganic surface modification agent of claims 1, 15 and 21-23, it is noted that the instant claims are directed to a treatment agent and not a method of making the treatment agent. Soane et al. teach the nanoparticles being contacted with a magnesium chloride and sodium chloride (§ 95 and 97) and Brueck et al. teach the modifying agent being ZrO<sub>2</sub> or TiO<sub>2</sub> (§ 58); thus the same resulting effect on the nanoparticle would be expected since similar modifying agents are used. Furthermore, it is noted that the subject matter would have been obvious to the skilled artisan because the patentability of a product by process claim does not depend on its method of production and where the examiner has found a similar product,

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the burden rests with the applicant to prove that that product is patentably distinct. See *In re Thorpe*, 227 USPQ 964 (CAFC 1985); *In re Marosi et al*, 218 USPQ 289; *In re Pilkington*, 162 USPQ 145. "The lack of physical description in a product-by-process claim makes the determination of the patentability of the claim more difficult, since in spite of the fact that the claim may recite only process limitations, it is the patentability of the product claimed and not the process that must be established. We are therefore of the opinion that when the prior art discloses a product which reasonably appears to be identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or 103 of the statute is eminently fair and acceptable. As a practical matter, the Patent Office is not equipped to manufacture products by the myriad processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 173 USPQ 685,688 (CCPA 1972).

4. Claims 1, 2, 5, 6, 8, 16-19 and 21-23 stand rejected under 35 U.S.C. 103(a) as obvious over Zuechner et al. (WO 01/83662 cited in the IDS - the English equivalent US 2004/0023824 is referred to hereon) in view of Brueck et al. (WO 01/40394 - the US equivalent 2002/0193504 is referred to)

Zuechner et al. disclose a finishing textile agent that includes inorganic nanoparticles such as silica that are surface modified by various chemicals and additional ingredients such as surfactant, thickeners and perfumes (abstract and § 11, 16-22, 32, 36, 67, 77, 88 and 126). Furthermore, Zuechner et al. disclose the features of various textiles such as cotton (§ 12), a concentration/content of nanoscale particles of 0.01 to 35 % by wt (§ 14-15) and a particle size of 5 to 500 nm (§ 10-11).

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The Zuechner et al. reference disclose the claimed invention but does not explicitly disclose the inorganic nanoparticle being surface modified by the claimed inorganic compounds; however, it is noted that it is well settled that it is *prima facie* obvious to combine two ingredients, each of which is targeted by the prior art to be useful for the same purpose. *In re Lindner* 457 F,2d 506,509, 173 USPQ 356,359 (CCPA 1972).

Given that the Brueck et al. reference teaches the feature of surfaced modified inorganic particle in the range of 5-40 nm (§51) such as SiO<sub>2</sub> particle modified by ZrO<sub>2</sub> or TiO<sub>2</sub> (§ 58) in a textile treatment composition, it would have been obvious to one of ordinary skill in the art to use the surfaced modification agents and nanoparticle features in the composition of the Zuechner et al. reference.

Zuechner et al. and Brueck et al. disclose the claimed composition but do not explicitly disclose a composition comprising the agents, thickness and diameter ranges in the amounts as those recited by the Applicant.

Given that the Zuechner et al. and Brueck et al. references disclose nanoparticles being in the same range as applicants to coat the textile, it would have been obvious to one of ordinary skill in the art to utilize any of the taught thickness sizes, including those presently claimed, to obtain a suitable composition, e.g. it would have been obvious to optimize the components based on the desired effect - see the various modifications shown in the examples starting on § 99.

Regarding the inorganic surface modification agent of claims 1, 15 and 21-23, it is noted that the instant claims are directed to a treatment agent and not a method of making the treatment agent. Brueck et al. teach the modifying agent being ZrO<sub>2</sub> or TiO<sub>2</sub> (§ 58); thus the same resulting effect on the nanoparticle would be expected since similar of modifying agent are used. Furthermore, it is noted that the subject matter would have been obvious to the

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skilled artisan because the patentability of a product by process claim does not depend on its method of production and where the examiner has found a similar product, the burden rests with the applicant to prove that that product is patentably distinct. See *In re Thorpe*, 227 USPQ 964 (CAFC 1985); *In re Marosi et al*, 218 USPQ 289; *In re Pilkington*, 162 USPQ 145. "The lack of physical description in a product-by-process claim makes the determination of the patentability of the claim more difficult, since in spite of the fact that the claim may recite only process limitations, it is the patentability of the product claimed and not the process that must be established. We are therefore of the opinion that when the prior art discloses a product which reasonably appears to be identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or 103 of the statute is eminently fair and acceptable. As a practical matter, the Patent Office is not equipped to manufacture products by the myriad processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 173 USPQ 685,688 (CCPA 1972).

5. Claims 1, 2, 5, 6, 8, 13-18 and 21-23 stand rejected under 35 U.S.C. 103(a) as obvious over Rohrbaugh et al. (US 2002/0151634) in view of Brueck et al. (WO 01/40394 - the US equivalent 2002/0193504 is referred to).

Rohrbaugh et al. disclose a coating composition that includes inorganic nanoparticles such as oxides and silicates that are surface modified by various chemicals and additional ingredients such as surfactant, softeners and perfumes (abstract and § 44-46, 58, 59, 123, 124 and 197). Furthermore, Rohrbaugh et al. disclose the features of various textiles such as cotton and synthetic fibers (§ 26), a concentration/content of nanoscale particles of 1 to 100 % by wt and 0.01 to 5% of the coating composition (§ 79), a particle size of 2 to 750 nm (§ 44) and a cationic particle charged via a  $\text{Al}^{+3}$  salt (§ 69).

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The Rohrbaugh et al. reference disclose the claimed invention but does not explicitly disclose the inorganic nanoparticle being surface modified by the claimed inorganic compounds; however, it is noted that it is well settled that it is *prima facie* obvious to combine two ingredients, each of which is targeted by the prior art to be useful for the same purpose. *In re Lindner* 457 F.2d 506,509, 173 USPQ 356,359 (CCPA 1972).

Given that the Brueck et al. reference teaches the feature of surfaced modified inorganic particle in the range of 5-40 nm (§51) such as SiO<sub>2</sub> particle modified by ZrO<sub>2</sub> or TiO<sub>2</sub> (§ 58) in a textile treatment composition, it would have been obvious to one of ordinary skill in the art to use the surfaced modification agents and nanoparticle features in the composition of the Rohrbaugh et al. reference.

Rohrbaugh et al. and Brueck et al. disclose the claimed composition but do not explicitly disclose a composition comprising the agents, thickness and diameter ranges in the amounts as those recited by the Applicant.

Regarding the thickness of the layer, given that the Rohrbaugh et al. and Brueck et al. references disclose nanoparticles being in the same range as applicants to coat the textile, it would have been obvious to one of ordinary skill in the art to utilize any of the taught thickness sizes, including those presently claimed, to obtain a suitable composition, e.g. it would have been obvious to optimize the components based on the desired effect - see the various modifications shown in the examples starting on § 99.

Regarding the inorganic surface modification agent of claims 1, 15 and 21-23, it is noted that the instant claims are directed to a treatment agent and not a method of making the treatment agent. Brueck et al. teach the modifying agent being ZrO<sub>2</sub> or TiO<sub>2</sub> (§ 58); thus the same resulting effect on the nanoparticle would be expected since similar of modifying agent are used. Furthermore, it is noted that the subject matter would have been obvious to the



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skilled artisan because the patentability of a product by process claim does not depend on its method of production and where the examiner has found a similar product, the burden rests with the applicant to prove that that product is patentably distinct. See *In re Thorpe*, 227 USPQ 964 (CAFC 1985); *In re Marosi et al*, 218 USPQ 289; *In re Pilkington*, 162 USPQ 145. "The lack of physical description in a product-by-process claim makes the determination of the patentability of the claim more difficult, since in spite of the fact that the claim may recite only process limitations, it is the patentability of the product claimed and not the process that must be established. We are therefore of the opinion that when the prior art discloses a product which reasonably appears to be identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or 103 of the statute is eminently fair and acceptable. As a practical matter, the Patent Office is not equipped to manufacture products by the myriad processes put before it and then obtain prior art products and make physical comparisons therewith." *In re Brown*, 173 USPQ 685,688 (CCPA 1972).

### ***Response to Arguments***

6. Applicant's arguments filed 08/25/09 have been fully considered but they are not persuasive. Applicants argue that the secondary reference of Brueck et al. does not teach the ZrO<sub>2</sub> and/or TiO<sub>2</sub> modification agent. The examiner respectfully disagrees and notes that, while the Brueck et al. reference does not disclose all the features of the present claimed invention, it is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224,226 (CCPA 1973), *In re Keller* 624 F.2d 413,208 USPQ 871, 88 1 (CCPA 198 1). Rather this reference teaches a certain concept, and in combination with the primary reference, discloses the presently claimed invention. Specifically, the primary references teach

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the surface modification of nanoparticles by various agents and the Brueck et al. reference is relied upon to teach the feature of ZrO<sub>2</sub> and/or TiO<sub>2</sub> as modification agents of nanoparticles. It is noted that a broad and reasonable interpretation of a surface modification agent would encompass the ZrO<sub>2</sub> and/or TiO<sub>2</sub> component partial integration/replacement into the nanoparticles as taught by the Brueck et al. reference (§ 58).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Arney et al. (US 2003/0068486) teach a composition for treating fibers that includes surface modified nanoparticles.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TRI V. NGUYEN whose telephone number is (571)272-6965. The examiner can normally be reached on M-F 8:00 AM to 5:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. V. N./  
Examiner, Art Unit 1796  
December 8, 2009

/Lorna M Douyon/  
Primary Examiner, Art Unit 1796